

**MS Project**  
**Department of Environmental Science and Policy**  
**College of Science**  
**George Mason University**

**Candidate:** Megan Horning

**Presentation Date and Time:** October 7, 2024 at 11:00am

**Presentation Location:** Virtual

**Title:** Behavioral and Physiological Responses to Seasonal Change in Maned Wolves (*Chrysocyon brachyurus*) Living in a North American Zoo

**Project Director:** Dr. Elizabeth Freeman

**Committee:** Dr. Rosana Moraes and Dr. Kathleen Hunt

**ABSTRACT**

Like most mammals, maned wolves (*Chrysocyon brachyurus*), a solitary canid native to the Brazilian Cerrado, face many threats to survival; understanding how they respond to environmental change can help improve management for welfare and breeding success.

Utilizing a novel bilogger, I monitored multiple physiological metrics, hormones, heart rate, and activity levels, to provide a more holistic assessment of seasonality in maned wolves. Data were collected from six wolves at the Smithsonian Conservation Biology Institute and Generalized Additive Models were built to assess drivers of the physiological metrics. Results showed this grassland species is sensitive to seasonal trends.